AFANAS'YEV, G.D.; LUPANOVA, N.P.; SVIRIDOV, V.V.

On the Devonian age of phyllitic slates of the Urup River Basin (Northern Caucasus). Dokl. AN SSSR 148 no.2:397-399 Ja '63.

(MIRA 16:2)

1. Institut geologii rudnykh mestorozhdeniy petrografii, mineralogii i geokhimii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Afanas'yev).

(Urup Valley—Phyllite)

AFANAS'YEV, G.D.

Necessity of the development of research in the field of igneous
activity, radiogeology, and ore formation. Izv. AN SSSR. Ser. geol.
29 no.10:3-9 O '64.   (MIRA 17:11)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii
i geokhimii AN SSSR, Moskva.

AFANAS'YEV, G.D.; SHCHERBAKOV, D.I.; SEMENENKO, N.P.; SOBOTOVICH, E.V.;
PEKARSKAYA, T.B.

Iosif Evseevich Starik, 1902-1964; obituary. Izv. AN SSSR. Ser.
geol. 29 no.10:122-124 O '64.   (MIRA 17:11)

MORKOVKINA, V.F.; AFANAS'YEV, G.D., otv. red.; FIN'KO, V.I., red.
izd-va; POLYAKOVA, T.V., tekhn. red.; PRUSAKOVA, T.A.,
tekhn. red.

[Chemical analyses of igneous rocks and rock-forming minerals]
Khimicheskie analizy izverzhennykh gornykh porod i porodo-
obrazuiushchikh mineralov. Sost. V.F.Morkovkina. Moskva, Izd-
vo "Nauka," 1964. 249 p.   (MIRA 17:3)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy,
petrografii, mineralogii i geokhimii. 2. Chlen-korrespondent
AN SSSR (for Afanas'yev).

SKORZHINSKIY, D.S., otv. red.; AFANAS'YEV, G.D., red.; MAKEYEV, B.V., red.; MORKOVKINA, V.F., red.

[Charnokites] Charnokity. Moskva, Izd-vo "Nauka," 1964. 86 p. (Its Doklady sovetskikh geologov. Problema 13)
(MIRA 17:6)
1. International Geological Congress, 22d. 1963.

AFANAS'YEV, G.D., glav. red.; VOROB'YEVA, O.A., red.; APEL'TSIN,
     F.R., red.; USTIYEV, Ye.K., red.; LEBEDEV, A.P., red.;
     SVESHNIKOVA, Ye.V., red.

[Origin of alkali rocks; transactions] Proiskhozhdenie
shchelochnykh porod; trudy. Moskva, Nauka, 1964. 146 p.
                                        (MIRA 17:11)
1. Vsesoyuznoye petrograficheskoye soveshchaniye. 3d.
2. Chlen-korrespondent AN SSSR (for Afanas'yev).

AFANAS'YEV, G.D.; BAYUK, Ye.I.; BELIKOV, B.P.; VOLAROVICH, M.P.; ZALESSKIY, B.V.

Physical properties and the absolute age of certain rocks in India and Ceylon. Izv. AN SSSR Ser. geol. 29 no.3:22-42 Mr '64
(MIRA 17:3)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR i Institut fiziki zemli AN SSSR, Moskva.

AFANAS'YEV, G.D., otv. red.; SHCHERBAKOV, D.I., akademik, zam.
         otv. red.

[Absolute age of geological formations] Absoliutnyi voz-
rast geologicheskikh formatsii. Moskva, Nauka, 1964.
462 p. (Mezhdunarodnyi geologicheskii kongress: Doklady
sovetskikh geologov. Problema 3)   (MIRA 18:4)

1. Natsional'nyy komitet geologov Sovetskovo Soyuza.
2. Chlen-korrespondent AN SSSR i predsedatel' Komissii po
opredeleniyu absolyutnogo vozrasta geologicheskikh forma-
tsiy (for Afanas'yev).

ACCESSION NR: AP4034538   S/0020/64/155/005/1058/1061

AUTHOR: Afanas'yev, G. D. (Corresponding member); Volarovich, M. P.; Bayuk, Ye. I.;
Galdin, N. Ye.

TITLE: Investigation of velocities of elastic waves in ultrabasic rocks of the
Monchegorsk pluton under high (allsided) pressure

SOURCE: AN SSSR. Doklady*, v. 155, no. 5, 1964, 1058-1061

TOPIC TAGS: elastic wave velocity, seismic research, transversal wave velocity,
longitudinal wave velocity, rock age, geology, geophysics, high pressure, pluton,
Monchegorsk pluton, tectonics

ABSTRACT: In preparation for the coming geological-geophysical (deep seismic
probing) of the Baltic shield, the authors have investigated the velocity of
elastic waves in ultrabasic rocks of the Monchegorsk pluton located in the central
part of the Kola Peninsula. The age of this rock (by the radioactive A-K method)
is about 3×10^9 years. The velocity of both longitudinal and transverse waves
was determined under pressures up to 4,000 kgm/cm^2. The velocity of the longitu-
dinal waves averaged from 7000 to 8000 m/sec, and that of the transverse waves

Card   1/2

ACCESSION NR: AP4034538

about 3000 to 4000 m/sec, at the maximal applied pressures. Rocks with microcracks show the greatest increase of velocity with increased pressure. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Institut fiziki Zemli im. O. Yu. Shmidta Akademii nauk SSSR (Institute for Physics of the Earth Academy of Sciences SSSR) Institut geologii rudny*kh mestorozhdeniy petrografii, mineralogii i geokhimii, Akademii nauk SSSR (Institute for Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry, Academy of Sciences, SSSR)

SUBMITTED: 21Jan64   DATE ACQ: 13May64   ENCL: 00

SUB CODE: ES   NO REF SOV: 011   OTHER: 000

Card 2/2

PLOSHKO, Vitol'd Vasil'yevich; AFANAS'YEV, G.D., otv. red.

[Urushtenskiy complex of the Northern Caucasus; its geology,
petrography, and accessory mineralization] Urushtenskii
kompleks Severnogo Kavkaza; geologiia, petrografiia i ak-
tsessornaia mineralizatsiia. Moskva, Nauka, 1965. 179 p.
                                        (MIRA 18:4)
1. Chlen-korrespondent AN SSSR (for Afanas'yev).

AFANAS'YEV, G.D., otv. red.; BELOV, I.V., otv. red.

[Petrography of Eastern Siberia] Petrografiia Vostochnoi
Sibiri. Moskva, Nauka. Vol.3. 1965. 314 p.
(MIRA 18:7)
1. Akademiya nauk SSSR, Sibirskoye otdeleniye. Institut
zemnoy kory. 2. Chlen-korrespondent AN SSSR (for
Afanas'yev).

AFANAS'YEV, G.D.; USHAKOV, V.B.

Ways of improving the power indices of crushing machinery for fine and medium crushing. Izv. vys. ucheb. zav.; tsvet. met. 8 no.1:28-33 '65.

(MIRA 18:6)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra elektrooborudovaniya i avtomatiki.

AFANAS'YEV, C.D.; DURNEV, M.Ya.

Selecting an efficient automatic control system for the charging of crushers for medium and fine grinding. Izv. vys. ucheb. zav.; tsvet. met. 8 no.3:168-173 '65.   (MIRA 18:9)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra elektrooborudovaniya i avtomatiki.

AFANAS'YEV, G.D.; GON'SHAKOVA, V.I.; KORZUN, V.P.

Abosolute age of some Upper Devonian alkali effusives in the southern part of the Russian Platform and the Northern Caucasus. Izv. AN SSSR. Ser. geol. 30 no.8:3-8 Ag '65.

(MIRA 18:9)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.

L 08411-67   EWT(1)   WVH/GW

ACC NR: AP6034379   SOURCE CODE: UR/0011/66/000/011/0009/0036

25

AUTHOR: Afanas'yev, G. D. (Corresponding member AN SSSR)

B

ORG: Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry, AN SSSR, Moscow   (Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR)

TITLE: New data on the relationship between the earth's crust and upper mantle

SOURCE: AN SSSR. Izvestiya, Seriya geologicheskaya, no. 10, 1966, 9-36

TOPIC TAGS: earth crust, upper mantle, Mohorovicic discontinuity, asthenosphere, elastic wave velocity

ABSTRACT: The nature of the Mohorovicic discontinuity and the characteristics of the crust and the upper mantle are re-examined on the basis of an extensive survey and analysis of recent literature [2 Soviet and 65 non-Soviet sources]. Crustal movements are interpreted in the light of changes in the oceanic and continental influences on the earth's surface throughout its geologic development. The following aspects of the problem are reviewed: 1) new facts on the geophysics and geology of the Atlantic Ocean and on the distribution of certain igneous rocks in the oceans and on the continents, 2) data on the distribution of K,

Card 1/3   UDC: 551.1

0

L 08411-67

ACC NR: AP6034379

Na, and Mg in recent igneous rocks,   3) the distribution of radiogenic Sr^{87} in different rocks,   4) new data on the propagation velocities of elastic longitudinal waves in rocks and monocrystals of minerals at high confining pressures, and   5) the origin of tectites and possible analogies between the structure of the earth and the moon.   It is concluded from these data that the distribution of petrographic types of igneous rocks under the oceans and on the continents is caused solely by the geologic history of the region and is independent of the crustal type.   The absence of any discernable patterns of distribution of radiogenic strontium in rocks attests to the fact that the deep-lying regions of magma formations belong to heterogeneous media.   Inasmuch as magmatic melts are generated at depths exceeding 100 km, it is probable that the upper envelope is heterogeneous and that — with regard to petrographic characteristics — it resembles the crust.   The Mohorovicic discontinuity cannot be considered the dividing line between two media of different petrographic composition, but rather represents a change, or increase in density, of the physical state of the rocks in a transition zone as the result of the elimination of pores and interstices.   The solid upper envelope of the earth (the earth's crust) is, in spite of its diverse nature, a single elastic medium which in the deep regions of the oceans is subjected to pressures some 600 times greater than that experienced by the continental crust.   As a result of this, the Mohorovicic discontinuity under the ocean floor, with Vp ~ 8.0 km/sec is located relatively

Card   2/3

L_08411-67

ACC NR: AP6034379   0

nearer the surface of the earth. New data on the relationship between
the asthenosphere, the earth's crust, and the upper mantle support the
contention that the sialic envelope of the earth is not bounded by the
Moho discontinuity, but, rather, extends to depths exceeding 100 km.
Orig. art. has: 8 figures and 6 tables.

SUB CODE: 08/ SUBM DATE: 23Jul66/ ORIG REF: 023/ OTH REF: 063/
ATD PRESS: 5103

Card   3/3   LS

AFANAS'YEV, G.D.; IVANOV, I.B.; SHANIN, L.L.

Potassium-argon dating of recent granitic magma. Izv. AN SSSR.
Ser.geol. 29 no.6:3-9 Je '64.   (MIRA 18:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR, Moskva.

ACC NR: AN7011025   SOURCE CODE: UR/9003/66/000/156/0003/0003

AUTHOR: Kildysh, M. V. (President, AN SSSR, Academician AN SSSR);
Afanas'yev, G. D. (Chief scientific secretary Presidium AN SSSR,
Corresponding member AN SSSR)
ORG: none
TITLE: New elections in the academy of sciences SSSR
SOURCE: Izvestiya, no. 156, 5 Jul 66, p. 3, col. 1-5
TOPIC TAGS: scientific personnel, scientific organization

ABSTRACT:
     On 13 April 1966, the Academy of Sciences USSR announced that it would
consider nominations for election of new members. In response to the
announcement, various scientific and educational institutes nominated 247
candidates for full membership (academician) and 491 for corresponding
membership. Of these, 46 were elected to full membership and 76 were
elected to corresponding membership. The names and affiliations of the
new members are listed below:

I.   Full Members

Division of Mathematics.   A. N. Tikhonov

Division of General and Applied Physics. N. G. Basov, L. F. Vereshchagin,
S. V. Vonsovskiy, V. L. Ginzburg, A. M. Prokhorov

Card 1/5

ACC NR: AN7011025

Division of Nuclear Physics. M. A. Markov, A. B. Migdal

Division of the Physical and Technical Problems of Energetics. V. I. Popkov

Division of Earth Sciences. V. V. Menner, M. A. Sadovskiy, A. V. Sidorenko

Division of Mechanics and Control Processes. V. P. Barmin, P. D. Grushin, V. P. Mishin, V. V. Novozhilov, N. A. Pilyugin, M. K. Angel'

Division of General and Technical Chemistry. I. V. Petryanov-Sokolov, G. A. Razuvayev, N. M. Emanuel'

Division of the Physical Chemistry and Technology of Inorganic Materials. I. P. Alimarin, S. T. Kishkin, A. M. Samarin

Division of the Biochemistry, Biophysics, and Chemistry of Physiologically Active Compounds. N. D. Iyerusalimskiy, Ya. V. Peyve, G. M. Frank

Division of Physiology. P. K. Anokhin, Ye. M. Kreps, V. V. Parin, B. V. Petrovskiy

Division of General Biology. B. L. Astaurov, N. P. Dubinin

Division of History. A. A. Guber

Card 2/5

ACC NR: AN7011025

Division of Philosophy and Law. B. M. Kedrov

Division of Economics. A. M. Rumyantsev, T. S. Khachaturov

Division of Literature and Language. V. M. Zhirmunskiy, M. B. Khrapchenko

Siberian Division. G. K. Boreskov, N. N. Vorozhtsov, A. B. Zhukov, Yu. A. Kuznetsov, L. A. Melent'yev, A. V. Nikolayev, V. V. Struminskiy

II. Corresponding Members

Division of Mathematics. N. P. Buslenko, V. Ya. Kozlov, S. P. Nivikov, Yu. V. Prokhorov, A. A. Samarskiy

Division of General and Applied Physics. L. D. Bakhrakh, A. F. Bogomolov, V. S. Borovik-Romanov, L. A. Vaynshteyn, L. P. Gor'kov, Ye. M. Lifshits, R. V. Khokhlov, I. S. Shklovskiy

Division of Nuclear Physics. V. P. Dzhelepov, L. B. Okun', Ye. L. Feynberg, L. P. Feoktistov, A. Ye. Chudakov

Card   3/5

ACC NR: AN7011025

Division of the Physical and Technical Problems of Energetics. N. S. Lidorenko

Division of Earth Sciences. Yu. D. Bulanzhe, P. N. Kropotkin, V. V. Rzhevskiy, A. B. Ronov, Ye. F. Savarenskiy, Ye. M. Sergeyev, A. I. Tugarinov, V. Ye. Khain

Division of Mechanics and Control Processes. G. S. Byushgens, S. V. Vallander, S. S. Lavrov, N. N. Moiseyev, I. F. Obraztsov, G. S. Pospelov, V. S. Pugachev, B. V. Raushenbakh, G. P. Svishchev

Division of General and Technical Chemistry. N. S. Yenikolopov, Ya. M. Kolotyrkin, A. A. Petrov, A. S. Sadykov

Division of the Physical Chemistry and Technology of Inorganic Materials. R. S. Ambartsumyan, V. V. Kafarov, B. N. Laskorin, Ye. M. Savitskiy

Division of the Biochemistry, Biophysics, and Chemistry of Physiologically Active Compounds. M. V. Vol'kenshteyn, M. N. Kolosov, M. A. Prokof'yev, A. S. Spirin, A. A. Shlyk

Division of Physiology. O. G. Gazenko, P. G. Kostyuk, A. M. Ugolev

Division of General Biology. A. P. Andriyashev, M. S. Gilyarov, A. L. Takhtadzhyan, S. S. Shvarts

Card 4/5

ACC NR: AN7011025

Division of History. Yu. V. Bromley, Ya. S. Grosul, Yu. A. Polyakov,
V. L. Yanin

Division of Philosophy and Law.   G. A. Aksenenok, D. A. Kerimov, T. I.
Oyzerman

Division of Economics. V. A. Vinogradov, A. G. Mileykovskiy, T. V.
Ryabushkin, V. G. Solodovnikov, T. T. Timofeyev

Division of Literature and Language. M. N. Bogolyubov, D. F. Markov

Siberian Division. A. A. Borovkov, G. S. Gorshkov, M. I. Kargapolov,
N. N. Puzyrev, M. G. Slin'ko, V. P. Solonenko, L. V. Tauson, N. N. Yanenko

/ATD Press: 5012-F/
SUB CODE: 05 / SUBM DATE: none

.Card 5/5

AFANAS'YEV, N.G.; SHEVCHENKO, N.C.; AFANAS'YEV, G.N.

Calorimeter for measuring bremsstrahlung beams. Prib. i tekh. eksp.
10 no.1:82-85 Ja-F '65. (MIRA 18:7)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

AFANAS'YEV, Georgiy Fedorovich

[Guarding the frontiers of our homeland; from the
history of border forces] Na strazhe rubezhei Rodiny;
iz istorii Pogranichnykh voisk.   Alma-Ata, Kazgosizdat,
1963.   174 p.   (MIRA 17:11)

CHAYKOVSKAYA, V.M.; AFANAS'YEV, G.F.; ZNAMENSKIY, G.N.

Properties of acid solutions of zinc sulfate. Zhur.prikl.khim.
36 no.6:1355-1357 Je '63.   (MIRA 16:8)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
            (Zinc sulfate) (Sulfuric acid)

AFANAS'YEV /A.G.

Neod/.coumarin therapy of patients with coronary insufficiency. Sov. med. 20 no.1:35-42 Ja '56.   (MLRA 9:5)

1. Iz gospital'noy terapevticheskoy kliniki (dir.-prof. P.E. Lukomskiy) II Moskovskogo meditsinskogo instituta imeni I.V. Stalina.
        (CORONARY DISEASE
            insuff., ther., ethyl biscoumacetate)
        (COUMARIN, ther. use
            ethyl biscoumacetate, in coronary insuff.)

AFANASYEV, G.G., LIPCHINA, L.P. (USSR)

"Cyticgemical Changes in a Cancer Cell Culture Produced by Radical-
Chain Reaction Inhibitors."

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

AFANAS'YEV, G.G.

Number of leucocytes and the leucocytic formula in healthy persons.
Lab. delo 7 no.1:21 Ja '61.   (MIRA 14:1)

1. Dispanser No.2 g. Shchadrinska.
                        (LEUCOCYTES)

S/020/63/148/005/026/029
B144/B186

AUTHORS: Afanas'yev, G. G., Lipchina, L. P., Pelevina, I. I.

TITLE: Sensitization of tumor cells to ionizing irradiation by
             inhibitors of radical reactions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 5, 1963, 1199-1201

TEXT: To confirm the assumption that inhibitors (In) of radical reactions
selectively sensibilize tumor cells to gamma irradiation, their effect com-
bined with Co irradiation was studied in the ascitic cells of mice in-
oculated with Ehrlich cancer. In in-vitro tests propyl gallate (PG) was
added 15 min before or after the irradiation. This increased the percentage
of aberrations from 9 to 17 %; with 800 r irradiation it was 41.4 %. 800 r
irradiation 15 min after PG addition resulted in 97.7 % aberrations, while
70 % were found when PG was added after irradiation. In-vivo tests were
conducted by administering 4(N,N-di-(β-hydroxyethyl)-amino-methyl)-1,2-di-
tert-butyl phenol (Ambunol) im. or intraperitoneally, 45 min before irradia-
tion with 200, 400 or 800 r. The aberrations were counted in smears taken
24, 48, and 72 hrs after irradiation. In consistency with data published

Card 1/2

Sensitization of tumor cells to...   S/020/63/148/005/026/029
                                                  B144/B186

for Synkavit, im. administration had no sensibilizing effect. On intra-
peritoneal injection of 70 mg/kg In and 400 r irradiation, the number of
aberrations was equal after 48 hrs and higher after 72 hrs than after a dose
of 800 r without In. The formula $100 - [(100 - P_{In})(100 - P_r)/(100 - P_0)]$
is proposed, where P_0 is the number of spontaneous aberrations, P_{In} the
number of aberrations under In effect, and P_r the number of radiation-
induced aberrations. The theoretical additive numbers of aberrations ob-
tained from this formula were much lower than those found experimentally.
Thus it was confirmed that inhibitors of free-radical reactions
radiosensitivity of tumor cells. There are 2 ...

L 06368-67

ACC NR: AT6015364

SOURCE CODE: UR/0000/65/000/000/0105/0110

AUTHOR: Afanas'yev, G. K.; Chegolin, P. M.

ORG: none

TITLE: A two-channel graph evaluator

SOURCE: AN BSSR. Institut tekhnicheskoy kibernetiki. Vychislitel'naya tekhnika (Computer engineering). Minsk, Nauka i tekhnika, 1965, 105-110

TOPIC TAGS: optic instrument, optic measurement, optic scanning, optic system, graphic data processing, curve follower, analog digital converter

ABSTRACT: The author describes a two-channel optical-electronic automatic graph evaluator. The device, discussed elsewhere by Afanas'yev, is shown in Fig. 1. The scanner (FDG-2) consists of two main units: the opto-mechanical graph scanner and the electronic register and control module. Figure 1 shows the cross-section of the scanner and its main components. The paper or positive photographic film chart containing the graph are driven by the roller (12) through the scanning area. A stepper motor (10) turns the roller (12) in predetermined increments of minimum 0.4 mm. The sampling points for the graph ordinates are therefore determined by the increments of the chart transport. The mirror (4) oscillates about its axis (2) due to the alternating magnetic field of the solenoid (1). The oscillation occurs at the natural mechanical

Card 1/3

ACC NR: AT6015364

O

frequency of the system (mirror (4) and spring (3)) of 25 cps. The mirror continuously scans the chart in the direction normal to the chart translation. The ordinate measurement occurs with respect to a plate, containing the base lines, and a scale with fixed divisions formed by alternating black and white lines. The operator can place the base line plate anywhere along the ordinate of the chart. The chart is illuminated by six light sources equipped with parabolic reflectors. The visor (11) is placed on the chart as indicated to mark the origin of graph evaluation. The objective (5) images the total scanning field, including the base line and the scale, into the plane of the wall (7) of the light tight enclosure (9) containing three photomultipliers (8) (only one is shown). There are three small appertures (6) in the wall (7) positioned such that each of the photomultipliers receives the light only from the chart, the base line plate or the scale respectively. The mirror (4) scans all three information sources simultaneously. The impulses from the photomultipliers, which occur whenever there is a change in light intensity due to an intercept of a line, are amplified and fed into a logic circuit which performs the coincidence detection, timing, digitizing and analog voltage generation functions. The graph evaluator can serve as an input unit to a computer in which case the timing is derived from the computer's own clock. If analog, rather than digital information is desired the evaluator is line synchronized. The electronic system is described in detail, including a block diagram. The evaluator is capable of sampling two graphs from one chart simultaneously, generating ordinate values and polarities with respect to the base lines, and maintaining an accuracy of better than 1% for the curve slopes less than ±87°. Orig. art. has: 2 figures.

SUB CODE: 09/ /SUBM DATE: 15Dec65/ ORIG REF: 000/ OTH REF: 000
Card 3/3

L 06364-67   EWT(a)/EWP(1)   IJP(c)   BB/GG/GD

ACC NR: AT6015367

SOURCE CODE: UR/0000/65/000/000/0140/0148

AUTHOR: Afanas'yev, G. K.

ORG: none

TITLE: Magnetic memory using core pairs

SOURCE: AN BSSR. Institut tekhnicheskoy kibernetiki. Vychislitel'naya tekhnika (Computer engineering). Minsk, Nauka i tekhnika, 1965, 140-148

TOPIC TAGS: core memory, computer memory, memory access technique, memory core, magnetic core, ferrite core memory, magnetic core storage

ABSTRACT: A method for increasing the reliability of magnetic core memories through utilization of so-called "core pairs" is the subject of this paper. The method is based on full currents, rather than on the coincidences of two half-currents, which renders the memory quite insensitive to power supply fluctuations. Each storage cell consists of two separate cores which form a core pair; one core serves as the main storage element and the other as an auxiliary element designed to facilitate the "write" and "read" operations. The auxiliary core has four windings: read, coupling to the main core, erase, and write. There are only two windings for the main core: the coupling to the auxiliary core and the sense winding. A slow-rise (sawtooth) pulse is used initially to reset the auxiliary cores to their original "1" state. Since both slopes

Card 1/2

ACC NR: AT6015367   0

of this pulse are low, the voltage induced in the coupling winding between the two
cores of the pair is insufficient to bring about a change of state in the main core.
Read or write pulses are rectangular, thus causing a rapid change in state of the aux-
iliary core. The voltage induced in the coupling winding is now sufficient to change
the state of the corresponding main core. Because of its slowness and relative com-
plexity, the core pair memory is best suited for special purpose computers not requir-
ing large storage capacity. A reduction in power is possible if cores having low co-
ercive force are used. The author includes a mathematical analysis of the optimum
pulse shape for the reset pulse and the configuration of the address system. Orig. art.
has: 12 formulas, 2 tables, 3 figures.

SUB CODE: 09/   SUBM DATE: 15Dec65

Card 2/2

L 06361-67

ACC NR: AT6015361

a signal from the computer programs for each application are described in detail. Two examples are given to illustrate the use of this technique: the calculation of external loading on a stabilized vessel during a swell, and the analysis of the wind effect on the vessel motion about its longitudinal horizontal axis. In both cases, motion oscillograms were obtained and subsequently evaluated using the graph scanning equipment. Orig. art. has: 6 figures.

SUB CODE: 09/ SUBM DATE: 15Dec65/ ORIG REF: 000/ OTH REF: 000

Card 2/2

AFANAS'YEV, G.N.

Explosion stamping. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.
nauch.i tekh.inform. no.1:26-28 '63.
(MIRA 16:2)
(Explosives in sheet-metal work)

L 47090-65 EWT(m) Psb DIAAP

...ON NR AP.... 30   ...../0082/0085

... P A........ ...

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1965, 82-85

TOPIC TAGS: bremsstrahlung, bremsstrahlung measurement

ABSTRACT: To eliminate the shortcomings of i... ...strum ents for measuring
....
v. 24, 400), this article suggests an a-c device based on the compensation
.... A te...... ...

... the absorbing and compensating .... w... .. .. With a
.. .. effective quanta, ... rement
error is 3% or less. With larger BS streams, the accuracy goes higher. Orig.
art. has: 4 figures and 3 formulas.

Card 1/2

L 47090-65

ACCESSION NR: AP4037030

Cord 2/2

89734

11.8300

AUTHORS: Afanas'yev, G. T., Bobolev, V. K., and Bolkhovitinov, L. G.

TITLE: The Theory of an Explosion Released by Impact

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol.136, No. 3, pp. 642-643

TEXT: The problem as to the conditions under which the explosion of an explosive is released by impact is studied in theory. The authors proceed from the assumption that the course of the impact explosion is a plastic deformation of the substance accompanied by the formation of centers with critical temperature. According to experiments made by V. R. Regel' and G. V. Berezhkova as well as by L. M. Kachanov, the stress at which plastic deformation occurs, depends on the factor α, and the ratio between the height and the diameter of the specimen. According to Refs. 4 and 5, $P = \sigma_s/3\sqrt{3}\,\alpha$

(1)is therefore written down as the first condition. P is the pressure necessary to release the explosion, σ_s - the flow limit of the substance. On the other hand, also the criterion by D. A. Frank-Kamenetskiy must be satis-

Card 1/3

89734

The Theory of an Explosion
Released by Impact

S/020/61/136/003/020/027
B004/B056

fied: $[d^2 QEz \exp(-E/RT)]/4\kappa RT^2 = \int$. Q is the thermal effect of the reaction per unit volume; E - the activation energy; κ - the coefficient of thermal conductivity; $\int$ = 3.32 in the case of a spherical center of explosion; d = diameter. If the temperature D is higher than the melting temperature T_m of the substance, it is necessary, according to Ref. 7, that the heating be accompanied by universal compression: $P = (T - T_m)\chi/\chi$. is the increase of the melting point per atmosphere. On the assumption that the extent of the heating center equals the height of the specimen to be compressed, the following second condition is written down: $\{(\alpha D)^2 QEz \exp[-E/R(T_m + \chi P)]\} /4\kappa R$ $(T_m + \chi P)^2 = \int (2)$. D is the diameter of the specimen. The conditions for the impact explosion are discussed for $T_{expl} < T_m$ and $T_{expl} > T_m$. In the former case, the condition (1) suffices to release an explosion. Since the factor α changes during deformation, a graphical solution is given for an ideal plastic body at $T_{expl} > T_m$. Curve I in Fig. 1 represents the condition (1) as $P = f(\alpha)$, curve II shows condition (2). The latter is satisfied only

Card 2/3

89734

The Theory of an Explosion
Released by Impact

S/020/61/136/003/020/027
B004/B056

with $\alpha \leqslant \alpha_1$ and $\alpha \geqslant \alpha_2$. Only within this region hot centers leading to explosion can be formed. There are 1 figure and 7 references: 6 Soviet and 1 British.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: July 30, 1960 by V. N. Kondrat'yev, Academician

SUBMITTED: July 28, 1960
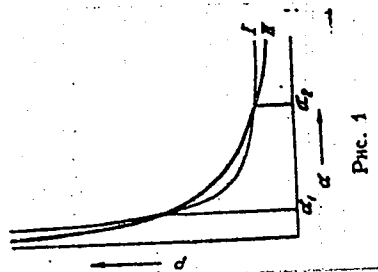
Card 3/3

20645

S/020/6:/:36/006/022/024
B103/B203

//. 8300

AUTHORS: Afanas'yev, G. T., Bobolev, V. K., and Bolkhovitinov, L. G.

TITLE: Estimation of the sensitivity of explosives

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 6, 1961, 1396-1398

TEXT: The authors worked out a comprehensive criterion for the sensitivity
of explosives considering the chemical, mechanical, and thermodynamic
properties of these substances. It also reflects the conditions of
mechanical action. Such a criterion has not yet been established in publi-
cations (Ref. 1; N. A. Kholevo, Ref. 2). The authors proceed from the
theory of heat explosion (tepovoy vzryv) and from the theorem of the role
of pressure in the initiation of explosion by impact. To attain, in the
zone of plastic deformation, the temperature T which exceeds the melting
temperature of the substance (T_{fus}), a pressure P must be applied:

$P = (T - T_{fus})/\alpha$ (1), where α is the increase of the melting point by 1 atm

(mostly, α is assumed to be 0.02 deg/atm). The extent of the zone of the

Card 1/5

20645

Estimation of the sensitivity of...

S/020/61/136/006/022/024
B103/B203

temperature T, in which no steady chemical reaction can take place, is determined on the basis of the theory of heat explosion. To subject a zone of the extent 1 to thermal self-ignition, 1 must be larger than l_{cr}, l_{cr} being calculated from A. A. Frank-Kamenetskiy's formula.

l_{cr}^2 QEz exp (-E/RT)/4χRT^2 = δ (2), where Q - the heat effect of the reaction per unit volume, E - activation energy, z - a factor, χ - coefficient of heat conductivity, and δ = 3.32 for a spherical center at the boundary of which the temperature T is maintained. The value l_{cr} determined from (1) and (2) shows that at a pressure P the effective center can only be larger, by no means smaller than l_{cr}. Consequently, l_{cr} is the critical dimension of the initiation at a pressure P. When an explosive specimen is equalized to an ideal plastic body deformed so as to have no scale effect, the heating temperature is, due to plastic deformation, limited by a pressure proportional to the yield point σ_S of the explosive.

Card 2/5

20645

Estimation of the sensitivity of...

S/020/61/136/006/022/024
B103/B203

This temperature is approximately equal to $T = T_{fus} + \frac{1}{3} \alpha \sigma_S$ (3). Thus, the dimension of the zone of plastic deformation, in which a steady reaction at the temperature T is impossible, only depends on the properties of the explosive. Therefore, this dimension may serve as a quantitative character-istic of the sensitivity of an explosive in the same way as the critical diameter of detonation may serve to estimate the detonating capacity of an explosive. The authors think it possible to establish a uniform order of sensitivity of explosives from this dimension which is calculated by substituting (3) in (2). They call this dimension the critical dimension of a substance. On the other hand, the pressure resulting in an explosive charge under mechanical action generally depends on the geometry of the charge. Thus, the scale effect strongly influences small specimens. There-fore, the authors suggest a further definition of l_{cr}: critical dimension of the initiation of charge. It depends both on the mechanical properties of the explosive and on the conditions of the action. This dimension reflects the relative sensitivity of explosives to mechanical action. The authors determined this l_{cr} for Ten, hexogen, tetryl, and trotyl on a ram

Card 3/5

20645

S/020/61/136/006/022/024
B103/B203

Estimation of the sensitivity of...

impact machine (koprovoye ispytaniye) (Table 1). Apparatus no. 2 of
N. A. Kholevo (Ref. 2) was used for this purpose. Pressure was determined
tensometrically. The values z and E were found by A. I. Serbinov. The
authors state that the knowledge of l_{cr} permits, in many cases, a rapid
and correct estimation of the probability of an explosion on the basis of
test conditions. According to Ya. I. Leytman, the degree of fine distribu-
tion of an explosive has no effect on its sensitivity to impact. The
authors, however, state that Leytman's conclusion only holds if the explo-
sive particles are smaller than l_{cr}. Up to this point, the conditions of
release of an explosion are not affected by the increase in size of
particles. In conclusion, the authors state that the use of l_{cr} permits a
simple and natural explanation of test results on ram impact machines. l_{cr}
expresses the possibility of formation of an effective center, which cor-
responds to the idea of the sensitivity being a "readiness for decomposi-
tion". There are 2 figures, 1 table, and 8 references: 6 Soviet-bloc and
1 non-Soviet-bloc.

Card 4/5

20645

S/020/61/136/006/022/024
B103/B203

Estimation of the sensitivity of...

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute
of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: July 30, 1960, by V. I. Kondrat'yev, Academician

SUBMITTED: July 28, 1960

Explosive	E, kcal	H_0, cm	P, kg/cm^2	l_{or}, cm
Ten	34	5	5000	$5 \cdot 10^{-3}$
Hexogen	37	5	5500	$7 \cdot 10^{-3}$
Tetryl	35	17	4900	$4 \cdot 10^{-2}$
Trotyl	48	40	7400	$2 \cdot 10^{-2}$

Table 1

Card 5/5

24062
S/020/61/138/004/023/023
B103/B203

//, 8300

AUTHORS: Afanas'yev, G. T. and Bobolev, V. K.

TITLE: Phlegmatizing of explosives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 4, 1961, 886 - 889

TEXT: The authors made experiments to clarify the phlegmatizing action of plasticizers in explosives. By artificial reduction of their sensitivity to mechanical influences it is possible to extend their applicability. The authors compared the behavior of pure hexogen with that of hexogen with 6% ceresin in impact. They used an impact machine with free discharge of the substance (suggested by Kholevo [Abstracter's note: machine not stated]). On the basis of an analysis of the results, the authors divide the process of impact compression in two sections: (1) the substance is deformed at pressures characteristic of the explosive and the thickness (h) of the chang-ing layer; (2) the residual layer is elastically compressed to a pressure determined by the initial momentum of the load and by its fraction lost in the deformation of the substance. The processes of the first section can be represented by $\sigma = f(\varepsilon)$ diagrams ($\varepsilon = \Delta h/h_o$; h_o = initial thickness of the

Card 1/5

Phlegmatizing of explosives

24062
S/020/61/138/004/023/023
B103/B203

specimen). The specimen is destroyed, and the pressure drops at the same time. Corresponding to the pressure drop, part of the substance is flung out of the pressure area during the destruction. The authors studied trotyl, tetryl, ten, ammonium perchlorate, pure chalk, chalk with different amounts of paraffin, gunpowder H (N), lead, hexogen of 1 - 10μ dispersity, and hexogen with the density of the single crystal. They suppose three destruction mechanisms: (1) loss of the stability of the friable medium; (2) rapid drop in viscosity; and (3) destruction of the whole specimen as a crystalline body. Since the destruction only occurs with trotyl, tetryl, ten, the two types of hexogen, ammonium perchlorate, and hexogen with phlegmatizer, and the destruction pressure is the higher, the higher the strength of the explosive, the authors assume mechanism (3). They calculate the temperature change due to the heat conductivity during the deformation time τ (mostly 500 - 600μ sec maximum), and conclude that the process of impact compression may be regarded to be adiabatic. The temperature in the layer rises with advancing deformation; on the other hand, compression strength and yield point drop with rising temperature. At the same time, the reduction of h/d (d being the diameter of the roller of the testing apparatus) leads to an increase in compression strength and yield point of the specimen. The $\sigma = f(\varepsilon)$ diagrams
Card 2/5

24062
S/020/61/138/004/023/023
Phlegmatizing of explosives...   B103/B203

reflect the action of these two influences. The authors choose the destruc-
tion pressure P as the best marked limit in the diagrams and oscillograms.
Fig. 2 shows the values of the destruction pressure as a function of h/d.
Hence, the authors conclude that the phlegmatizer reduces the carrying
capacity of the specimen. With the development of deformation, the picture
changes rapidly due to the temperature increase of the specimen. Phlegma-
tized hexogen is more dependent on the scale, and becomes more solid than
hexogen in the case of h/d = 0.017. The authors explain the difference in
sensitivity of hexogen from phlegmatized hexogen with the fact that in the
latter the whole energy absorbed by the specimen is mainly generated in the
interlayers of the plasticizer. If the isothermal curve of the scale effect
and the temperature dependence of the compression strength are known, it is
possible to determine the average temperature of the explosive both with
and without phlegmatizer with the aid of the function P = P(h/d) constructed
on the basis of dynamic tests. The authors recommend the determination of
l = P(h/d) as a method of studying the efficiency of phlegmatizing by means
of a plasticizer. A comparison of the P = P(h/d) curves permits the choice
of a corresponding amount of a certain plasticizing combination for every
dispersity. Most efficient are phlegmatizers whose heat conductivity is
Card 3/5

24062

S/020/61/138/004/023/023
Phlegmatizing of explosives...   B103/B203

much higher than that of the explosive. Finally, the authors discuss phlegmatizing in connection with the critical dimension of initiation (G. T. Afanas'yev, V. K. Bobolev, L. G. Bolkhovitinov, (Ref 4: DAN, 136, No. 6 (1961)). They state that the dispersity cf a plasticizer for explosives which only explode under the condition of critical stresses (G. T. Afanas'yev, V. K. Bobolev, L. G. Bolkhovitinov, DAN, 136, No. 3 (1961) must be lower than the critical dimension of initiation of the charge. Therefore, a plasticizer must be well adsorbable to the small crystals of the explosive in order to isolate them properly. If an uneconomical amount of phlegmatizer should be required, preliminary phlegmatizing must be carried out by the following methods: lowering of the melting point and strength properties of substances and products. An explosive whose flash point is lower than its melting point (lead azcimide) can be made more sensitive by plasticizers. Here, phlegmatizing can be attained by weakening the crystal lattice. The authors thank L. G. Bolkhovitinov and I. A. Karpukhin for discussing the above-mentioned problems. There are 3 figures and 6 Soviet-bloc references.

Card 4/5

24062

S/020/61/138/004/023/023
B103/B203

Phlegmatizing of explosives

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute
of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: December 28, 1960 by V. N. Kondrat'yev, Academician

SUBMITTED: December 28, 1960
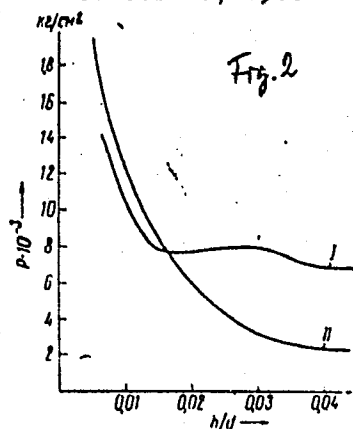
Fig. 2: Destruction pressure as
a function of h/d.
Legend: (I) hexogen, (II) hexogen
with phlegmatizer.

Card 5/5

AFANAS'YEV, G.T.; BOBOLEV, V.K.; KARPUKHIN, I.A.

Sensitivity of an explosive to mechanical effects and methods
of phlegmatization. Vzryv. delo no.52/9:5-10 '63.

(MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR.

Country : USSR   J
Category: Soil Science   Soil Genesis and Geography.

Abs Jour: RZhBiol., No 14, 1958, No 63019

Author : Afanas'yev, G.V.; Lyakhov, A.I.
Inst   : Moscow Agricultural Academy in K. A. Timiryazev
Title   : Some Features of Soil Formation in Northern Rayons
           of the Arkhangel'skya Oblast.

Orig Pub: Dokl. Mosk. s.-kh akad in K A. Timiryazeva,
           1957, vyp. 29, 237-243

Abstract: Results are presented of soil investigations carried
           out in 1956 in the Kholmogorskiy, Yemetskiy and
           Vel'skiy rayons of Arkhangel'skaya oblast. The fea-
           tures of podzol soils formed in two-layer deposits
           are examined -- F N. Sofiyeva

Card   : 1/1

                              J-3

AFANAS'YEV, G.V., starshiy nauchnyy sotrudnik, kand. nauk.

Mechanical make-up of soils of the Moscow River floodlands on the
"Faustovo" State Farm. Dokl. TSKhA no.29:251-256 '57. (MIRA 11:8)
(Moscow Valley—Soil physics)

USSR / Soil Science.   Soil Genesis and Geography.   J

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6035.

Author   : Afanas'yev, G. V.
Inst   : Moscow Agricultural Acad. im. K. A. Timiry-
           azev.
Title   : Soil of the South-Eastern Districts of Bol'shez-
           emel'naya Tundra and Forest Tundra.

Orig Pub: Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva,
          1957, vyp. 31, 252-258.

Abstract: The soils of the tundra and forest tundra in
          the area of the city of Vorkuta are characterized
          by an acid reaction (pH 3.4-4.2), a total in ex-
          changeable bases of 11.83 - 26.3 milliequivalents
          in the top horizons and 1.47 - 9.23 milliequiva-
          lents per 100 grams of soil in the lower hori-
          zons, a saturation level in the bases of from 18

Card 1/2

USSR / Soil Science.   Soil Genesis and Geography.   J

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6035.

Abstract: to 72.3%, a humus content in the top horizon of
2.24 - 5.64%, total N 0.152 - 0.257%, K - 6.25-
22.4, P_2O_5 - 3.75-12.75 mg per 100 grams of soil.
The top soil horizons are saturated with hydrogen
ions. To increase the fertility of these soils
it is imperative to apply lime and peat-manure
compost. -- S. A. Nikitin.

Card 2/2

9

USSR/Soil Science - Soil Genesis and Geography   J

Abs Jour   : Ref Zhur Biol., No 1, 1959, 1330

Author   : Afanas'yev, G.V., Lyakhov, A.I.

Inst   : Moscow Agricultural Academy im. K.A. Timiryazev

Title   : Characteristics of Bottom Land Soils of the Northern
               Dvina River

Orig Pub   : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1957,
               vyp. 31, 259-264

Abstract   : In bottom lands of the northern Dvina River and its tri-
               butaties within Kholnogorskiy and Eletskiy Rayons of
               Arkhangel'skaya Oblast' there are located stratified
               alluvial sands (weakly touched by processes of soil for-
               mation), turf of diverse textures, and turf-meadow and
               muck-bog soils. Turf-meadow loam and clay soils predomi-
               nate. The pH of the soil solution was 5.8 - 6.5;

Card 1/2

USSR/Soil Science - Soil Genesis and Geography.   J

hydrolytic acidity was 0.65 - 1.07 mEq, milliequivalents,
saturation of absorbed bases 98 - 98%, humus content
4.1 - 5.7%, P_2O_5 12, K_2O 10.5 - 5.5, N 8.4 mg on 100 g
of soil. Characteristic morphology of the soils is also
noted. -- L.R. Asmayev

CATEGORY   : Soil Science. Soil Genesis and Geography.

ABS. JOUR : Ref Zhur -Biologiya, No. 5 , 1959, No. 20023

AUTHOR   : Afanas'yev, G.V.
INST.   : Moscow Agric.Acad. imeni K.A. Timiryazev
TITLE   : Andriyanov Island Soils in the Delta of
              the Northern Dvina

ORIG. PUB.: Dokl. Mosk. s.-kh. akad. im. K.A.
             Timiryazeva, 1958, vyp. 34, 193-198

ABSTRACT   : No abstract

CARD: 1/1

S/084/60/000/007/006/007
A104/A029

2f.2140

AUTHOR: Afanas'yev, I., Graduate Engineer

TITLE: Overall Tests

PERIODICAL: Grazhdanskaya Aviatsiya, 1960, No. 7, p. 7

TEXT: The author gives a brief description of tests to which repaired
HБ3-ФA-PУ (NBZ-FA-RU) and HB-82 (NV-82) pumps were subjected. These direct in-
jection pumps were equipped with a PC-24M (RS-24M) fuel regulator. Tests were
carried out on a safe HB (NV) laboratory installation which simulates fully ac-
tual working conditions in an aircraft. The installation consists of a group of
measuring cylinders fitted with a fuel stopcock. The fuel supply is determined
by the number of pump plunger strokes.

Card 1/1

AFANAS'YEV, I.

AFANAS'YEV, I.   Clinical determination of pregnancy in agricultural animals. Riga, Latvian State Publishing House, 1953. 103 pages with illustrations; price 1 ruble 65 kopeks; 2,000 copies. In Latvian.

So: Veterinariya; 30; 11; November 1953; Uncl.
TABCON

AFANAS'YEV, I.

For a high level of labor productivity in automotive transportation.
Avt.transp. 32 no.6:7-9 Je '54.   (MLRA 7:9)

1. Zamestitel' ministra avtomobil'nogo transporta i shosseynykh
dorog Latviyskoy SSR.
    (Transportation, Automotive)

AFANAS'YEV, I.

USSR/Electronics - Radio design

Card   1/1   ‡   Pub. 89 - 8/29

Authors   ‡   Afanas'yev, I.

Title   ‡   New radio-equipment designs

Periodical ‡   Radio 7, page 12, July 1954

Abstract   ‡   The article describes improvements made in the following radio equip-
ment recently redesigned by engineers of the Ordzhonikidze Radio Fac-
tory: 1) Radio-receiver Class IV, "Moskvich"; 2) Radiola Class IV,
"Kama", and 3) Radiola Class II, "Ural". In the "Moskvich" receiver,
the following parts were redesigned and improved: capacitor blocks,
transformers, tuning scale, and the form of the cabinet. Design of a
new model, Class II radiola, operating on long, medium and ultra-short
waves, is to be completed shortly.

Institution :   ...

Submitted   :   ...

AFANAS'YEV, I.A.

The Mechanical Properties of Hard Alloys and Their Application in Mining. I. A. Afanasiev (Gorny Zhur. (Mining J.), 1937, 118, (15), 54-55).—[In Russian.] Discusses the economic and technical advantages of the use in mining of hard metals of the Pobedit type.—D. R. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KUZ'MENKO, V.K., inzhener; AFANAS'YEV, I.A., inzhener; LIBERMAN, A.S., inzhener; BEL'CHUK, G.A., kandidat tekhnicheskikh nauk.

Deformations in sheet-steel hull structures and ways to avoid them. Sudostroenie 22 no.7:19-23 Jl '56.   (MLRA 9:10)

(Hulls (Naval architecture)) (Deformations (Mechanics))

AFANAS'YEV, I.A., inzhener.

Electric welding practices. Sudostroenie 22 no.12:34-35 D '56.
   (Electric welding)
   (Bulkheads (Naval architecture))

(MLRA 10:2)

AFANAS'YEV, I.A., inzhener.

Improving the mastic filler lead-ins for VM-35 and MKP-35 cutout switches. Energetik 5 no.5:8-11 My '57.   (MIRA 10:6)
(Electric cutouts)

AFANAS'YEV, I.A.

Correlation of total incidence of disease (medical visits) and
incidence with temporary disability. Zdrav.Ros.Feder. 4 no.11:8-12
'60.   (MIRA 13:11)

1. Iz mediko-sanitarnoy chasti Chelyabinskogo zavoda imeni Sergo
Ordzhonikidze.
        (CHELYABINSK--MACHINERY INDUSTRY--HYGIENIC ASPECTS)
        (DISABILITY EVALUATION)

AFANAS'YEV, I.A.

Role of night preventoriums in health-promotion work among workers earmarked for dispensary treatment. Zdrav. Ros. Feder. 6 no.3:10-14 Mr '62. (MIRA 15:4)

1. Iz mediko-sanitarnoy chasti Chelyabinskogo zavoda imeni S.Ordzhonididze (nachal'nik I.A.Afanas'yev).
(MEDICINE, INDUSTRIAL)

MIKHAYLOVA, K.K. (Krasnoyarsk); SHKREBKO, P.I. (Kiyev); AFANAS'YEV, I.A.
(Pskovskaya oblast'); YUN SU-GON (Shaktersk, Sakhalin); ZHEMAYTIS, I.
[Zemaitis, J.] (Kaunas)

Editor's mail. Mat. v shkole no.2:46-51 Mr-Ap '63.   (MIRA 16:4)
(Mathematics—Study and teaching)

KAVUNOV, Petr Aleksandrovich; AFANAS'YEV, I., red.; LUKASHEVICH, V.,
        tekhn.red.

        [Cities of Saratov Province; their economic geography] Goroda
        Saratovskoi oblasti; ekonomiko-geograficheskii ocherk. Saratov-
        skoe knizhnoe izd-vo, 1958. 173 p.   (MIRA 12:6)
                (Saratov Province--Economic conditions)

AFANAS'YEV, I.A., kand.sel'skokhozyaystvennykh nauk

"Without clean fallows" by M.E.Pronin, V.G. Mineev, M.I. Shapovalova.
Reviewed by I. A. Afanas'ev. Zemledelie 24 no.8:94-95 Ag '62.
(MIRA 15:9)
(Agriculture) (Pronin, M.E.)
(Mineev, V.G.) (Shapovalova M.I.)

BYREYEV, P.A., prof.; VAESHAMOV, L.A., prof.; VOLYNSKIY, B.G., dotsent;
GERASIMOV, N.V., dotsent; GUREVICH, L.I., dotsent; ZHELYABOVSKIY,
G.M., prof.; KARTASHOV, P.P., prof.; KOCHETOV, K.P., dotsent;
KRUGLOV, A.N., prof.; KUTANIN, M.P., prof.; LARINA, V.S., dotsent;
LOBKO, I.S., doktor [deceased]; LUKOVA, A.I., prof.; MAKHLIN,
Ye.Yu., prof.; NAUMOV, A.I., kand.med.nauk; POPOV'YAN, I.M., prof.;
SOLUN, N.S., kand.med.nauk; TARABUKHIN, M.M., dotsent; TRET'YAKOV,
K.N., prof.; TRISHINA, A.A., kand.med.nauk; UL'YANOVA, A.V., dotsent;
FAYN, A.E., kand.med.nauk; FAKTOROVICH, A.M., dotsent; FRANKFURT,
A.I., prof.; FISHER, L.I., dotsent; CHASOVNIKOVA, Ye.P., kand.med.
nauk; SHAMARIN, P.I., prof.; SHAPIRO, M.Ya., dotsent; SHVARTS, L.S.,
prof.; SHUSTERMAN, I.B., dotsent; FOY, A.M., prof.; FREYDMAN, S.L.,
kand.med.nauk; NIKITIN, B.A., dotsent, red.; AFANAS'YEV, I.A.,
red.; LUKASHEVICH, V., tekhn.red.

[Concise medical reference book] Kratkii terapevticheskii spra-
vochnik. Izd.3., ispr. i dop. Saratov, Saratovskoe knizhnoe
izd-vo, 1959. 919 p.   (MIRA 13:7)

1. Chlen-korrespondent AMN SSSR (for Tret'yakov).
   (MEDICINE--HANDBOOKS, MANUALS, ETC.)

S/204/62/002/004/017/019
E075/E435

AUTHORS: Afanas'yev, I.B., Beer, A.A.

TITLE: Telomerization between ethylene and dihalogen
             derivatives of methane

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 611-616

TEXT: The telomerization of ethylene was investigated with
CH_2Cl_2, CH_2Br_2, CH_2ClBr and $CHCl_3$. The experiments were conducted
in an 11 litre autoclave using benzoyl peroxide as the reaction
initiator. It was shown that the composition of the reaction
products (reaction temperature 100 or 200°C) as given by
J.Harmon et al (J. Amer. Chem. Soc., 72, 1950, 2213) is not
correct in that α,α-dichloralkanes are formed and not α,ω-dichlor-
alkanes. For CH_2Br_2 telomerization, which is described by the
authors for the first time, the reaction products are
α,ω-chlorobromoalkanes. On the basis of the Walling equation
(C.Walling, Free Radicals in Solution, 1957) the chain transfer
constants were calculated for the four dihalogenomethanes. The
values obtained confirm the applicability of the Taft equation.
It was found that only CH_2ClBr and CH_2Br_2 form
Card 1/2

Telomerization between ethylene ...

S/204/62/002/004/017/019
E075/E435

α,ω-dihalogenoalkanes, the first of the two being more attractive in view of its relative cheapness and greater suitability for the synthesis of aminoacids, aminoalcohols, diamines, diols, dicarboxylic acids and long-chain aminoacids.   Using the methods of ammonolysis, cyanation and cyanomethylation in the presence of $NaNH_2$ the authors synthetized nonamethylene diamine, undecamethylenediamine, azelaic acid, chlorenantic, chlorpelargonic and chlordecanoic acids and other compounds. There are 2 figures and 2 tables.

ASSOCIATION: Gosudarstvennyy institut azotnoy promyshlennosti
             (State Institute of the Nitrogen Industry)

Card 2/2

AFANAS'YEV, I. B.; BEER, A. A.

Telomerization of bromochloromethane with ethylene. Zhur. VKHO 7
no.5:595-597 '62.   (MIRA 15:10)

1. Gosudarstvennyy institut azotnoy promyshlennosti i organi-
cheskikh produktov.

(Methane)   (Ethylene)   (Polymerization)

AFANAS'YEV, I.B.; OVAKIMYAN, G.B.; YEREMINA, T.N.; VORONINA, I.B.;
        SMAYL'S, L.K.; BEER, A.A.

Synthesis of diamines, dicarboxylic acids, and
chloro-substuted monocarboxylic acids based on telomers of
chlorobromomethane with ethylene. Khim.prom. no.10:709-712
O '62.   (MIRA 15:12)
                        (Amines)
                     (Acids, Organic)
                       (Polymers)

L 61018-65

ACCESSION NR: AP5013774

AUTHOR: Afanas'yev, I. B., Yerumaim,

TITLE: Telomerization of ethylene with chlorobromomethane: relationship between the reactivities of chlorobromomethane   with ethylene along the C—Br and C—H bonds

SOURCE: Zhurnal organicheskoy khimii, v. 1, no. 5, 1965, 844-848

TOPIC TAGS: telomerization, chlorobromomethane reactivity, chlorobromomethane ethylene telomerization, carbon bromine bond, carbon hydrogen bond, chain transfer constant, reaction rate constant,   chlorobromomethane conversion, nonyl chloride, heptyl chloride, chlorobromoalkane

ABSTRACT: The relationship of two different reactions in the telomerization of chlorobromomethane with ethylene along the C-Br and C-H bonds was investigated and the results presented in Table 1   chain transfer constants C_n were determined so that the   1) the C_n have a maximum value at $n = 5$; 2) the C_n value for the C—H(C^H) is about 10 times as low as that for C—Br(C^{Br}); and 3) the ratio $k_1:k_2 = 10$ of the rate con-

Card 1/4

L 61018-65
ACCESSION NR: AP5013774

stants of the two reactions is not affected by the length of the alkyl telomer

las and 2 tables.

ASSOCIATION:

Research and Planning Institute for the Nitrogen Industry and Organic Synthesis Products)

SUBMITTED:

NO REF SOV: 003

Card 2/4

L 61018-65
ACCESSION NR: AP5013774

Table 1. Telomerization of ethylene with chlorobromomethane at 100 C and initial ethylene pressure of 40 atm

Experiment No.	Amount of dibromomethane, g	Amount of benzol, g	Initiating agent,		Conversion of chlorobromomethane,
1	672	—	PB[b]		
2	672		AIN[c]		
			ABN (4.0)	1.37±0.005	11.8

Card 3/4

L 61018-65
ACCESSION NR: AP5013774   ENCLOSURE: 02

Table 1 (Cont.)

Telomer composition (mol.%)[e]						Heptyl chloride, mol.% for n_3	Nonyl chloride, mol.% for n_4
n	n_1	n_2			higher		

Notes. a) The experiment was carried out at ... ... is benzoyl peroxide; c) ABN is azoisobutyronitrile; ... ... periment N ... ... unreacted chlor ... ... bromoalkanes is 9.1 mol.%; it is assumed that there was to be 0.1 mol.% on the alkyl chlorides; f) calculated in accordance with the formula. n is chain length, ... is radical.

KATSOBASHVILI, V.Ya.; SAFRONENKO, Ye.D.; AFANAS'YEV, I.B.

Determination of the chain transfer constants in the reaction of ethylene with ethyl iodide. Vysokom. soed. 7 no.5:823-827 My '65.

(MIRA 18:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

BELYAYEV, V.S.; MIKHAYLOV, V.P.; CHERNOV, S.A., retsenzent; AFANAS!YEV,
   I.D., retsenzent; KOVANSKIY, A.A., retsenzent; DUGINA, N.A.,
   tekhnicheskiy redaktor

[Traffic regulations for the automobile driver] Voditeliu o
pravilakh dvizheniia avtomobilia. 2-e ispr. i dop. izd. Moskva,
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1953. 126 p.
[Microfilm]   (MLRA 7:10)
     (Automobile drivers)   (Traffic regulations)

AFANAS'YEV, I.D.

The viscosities of crude-oil products. I. D. AFANAS'YEV. *Neftyanoe Khozyaistvo* 17, 218-29(1929).—Engler and abs. viscosities of various gasolines, kerosenes and lubricating oils were measured and also calcd. for various temps. Curves were constructed. The calcd. and observed abs. viscosities were in agreement when Ubbelohde's equation was used. By plotting viscosities against temps. on logarithmic paper, almost straight lines were obtained. An equation was constructed to calc. intermediate points. The change in the viscosity of turbine oil was studied after treatment with fuming acid and that of spindle oil after treatment with concd. H_2SO_4. Forty-eight % by wt. of 20% fuming H_2SO_4 was used for 12 succeeding treatments whereby 50% of the original turbine oil distillate was recovered. The abs. viscosity detd. in a Bome viscometer at 55.9° decreased from 0.1755 for the untreated distillate to 0.129 for the final product, while for 100° the values obtained were 0.01002 and 0.0179 (after neutralization and treatment with fuller's earth). For spindle oil treated with concd. H_2SO_4 (in one operation), 3% of acid and 9% of oil were consumed and the abs. viscosities (calcd.) amounted to 0.08 and 0.70 at 25° and 0.019 and 0.0189 at 150°.

L. A. BOENTLINGK

METALLURGICAL LITERATURE CLASSIFICATION

ΠΓΠΝΠϽ ΓΕΥ, Γ·Ρ.

AUTHORS: Afanas'ev, I.D., Gadaskina, N.D., Remiz E.K., Budkovskiy, D.M.

65-6-3/13

TITLE: Complex esters from products of oxosynthesis and other products of chemical processing of hydrocarbons. (Slozhnye efiry iz produktov oksosinteza i drugikh produktov khimicheskoy pererabotki uglevodorodov).

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and Technology of Fuels and Lubricants) 1957, No.6, pp.16-25, (USSR).

ABSTRACT: An experimental work on the synthesis of a series of complex esters and determination of their properties is described. The following raw materials were used: 1) Monohydroxy alcohols from oxosynthesis; dihydroxy alcohols obtained in a treatment of unsaturated gaseous hydrocarbons; di- and trihydroxy alcohols - condensation products of propionic and butyric aldehydes with formaldehyde. 2) monocarboxylic fatty acids, obtained by oxidation of paraffins and by oxidation of aldehydes from oxosynthesis; dicarboxylic acids of fatty and aromatic series. Technical mixtures were mainly used so that technical mixtures of esters were obtained. Esterification was carried out on boiling of mixtures of acid, alcohol, catalyst and oxygen,

Card 1/4

Complex esters from products of oxosynthesis and other products of chemical processing of hydrocarbons. (Cont.) table 5. Esters of trihydroxy alcohols and normal acids 65-6-3/13 (including those obtained by oxidation of paraffins) are given in table 6. Esters of trihydroxy alcohols and acids from oxosynthesis - table 7. Complex esters of adipic and phthalic acids and primary alcohols (from C_4 to C_{18}), secondary hexyl alcohol, mono- and triethylene glycol were also obtained. Esters of adipic acids and monohydroxy alcohols are given in table 8. The influence of the structure of the alcohol component on the solidification temperature of adipic acid esters is shown in table 9. Phthalic esters of mono-hydroxy alcohols are given in table 10. Data on adipic and phthalic acid esters of dihydroxy alcohols are given in the text. The following data are given in tables: starting components, boiling range of esters, specific gravity, molecular weight, volatility %, viscosity, temperatures of turbidity and loss of fluidity, acid on saponification numbers. For comparison literature data on molecular weight, viscosity and solidification temperature of a number of esters are given in table 11. It is concluded that from synthesised products the following are of practical interest: esters of butyleneglycol, diethylene- and

Card 3/4

Complex esters from products of oxosynthesis and other products of chemical processing of hydrocarbons. (Cont.)

65-6-3/13

triethylene glycol and fatty acids (C_6 and above) of normal or branched structure; b) esters of methyl- and ethylmethylolmethane and fatty acids (C_6 and above) of normal and branched structure; c) esters of adipic acid and iso alcohols (C_6 and above); particularly good results were obtained with alcohols with the most branched hydrocarbon chain; and d) esters of phthalic acid and iso alcohols (C_4 and above). It was established that as a starting raw material for the production of complex esters with one complex ester grouping and possessing a low solidification temperature, the products of oxo-synthesis can be used. Certain fractions of fatty acids of normal structure, obtained by oxidation of paraffins as well as acids from oxo-synthesis can be used for the production of complex esters of poly-hydroxy alcohols (di and triol). Technical mixtures of alcohols and acids can be used for the production of complex esters. The required mean properties of esters can be obtained by selection of corresponding fractions from mixtures of complex esters produced. There are 11

Card 4/4 tables and 7 references including 4 Slavic.
ASSOC: Len NII.
AVAILABLE:

L 34839-65   EWT(m)/EPF(o)/T Pr—4   DJ
ACCESSION NR: AP5008534   S/0286/65/000/006/0036/0037

AUTHOR: Grigor'yeva, A. I.; Afanas'yev, I.D.

TITLE: A method for producing dixanthate antiwear additives for lubricating oils.
Class 23, No. 169165

SOURCE: Byulleten' izobreteniy i tovarnyٜ   ٜٜ   ٜٜ , 1965, 36-37

TOPIC TAGS: antiwear additive, aliphatic sulfur compound, xanthate, lubricating oil

ABSTRACT: This Author's Certificate ٜٜٜ ٜٜٜ ٜٜٜ ٜٜٜ ٜٜ ٜٜٜ producing dixanthate
antiwear additives for lubricٜٜٜٜ ٜٜٜ ٜ ٜٜٜٜٜٜ ٜٜٜٜ ٜٜٜٜ
with ٜٜ ٜٜ ٜٜٜٜ ٜٜٜٜٜٜ ٜٜٜٜٜٜٜٜ ٜٜٜٜٜ
w ٜٜٜ ٜٜ ٜٜ ٜٜٜٜٜٜ ٜٜ ٜٜٜٜٜٜٜ
ٜ ٜٜ ٜٜ ٜٜٜٜٜٜ ٜٜٜٜ
ٜ ٜٜٜ ٜٜٜٜٜٜ ٜٜٜ ٜٜٜٜٜ ٜٜٜٜٜ
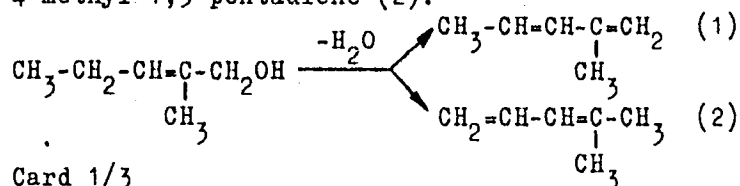ٜٜٜٜٜ ٜٜٜ ٜٜٜٜٜٜٜٜ ٜٜٜ ٜٜ

ASSOCIATION: none

Card 1/2

AUTHORS: Ivanov, V. S. and Afanas'yev, I. D.

TITLE: Diolefins From Unsaturated Alcohols. IV. Catalytic Dehydra-
            tion of 2-Methyl 2-Penten-1-ol

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3826-3831

TEXT: 2-Methyl 2-penten-1-ol, among other alcohols, is used as initial
compound in the catalytic dehydration treated in Refs. 1 and 2, but is
described insufficiently in the chemical literature (Refs. 3-5). Data con-
cerning its dehydration have not been published at all. It was to be ex-
pected that the dehydration of this compound would lead to conjugated di-
olefins of the composition C_6H_{10}, i.e. 2-methyl 1,3-pentadiene (1) and
4-methyl 1,3-pentadiene (2):

$$CH_3-CH_2-CH=C-CH_2OH \xrightarrow{-H_2O} \begin{cases} CH_3-CH=CH-C=CH_2 \quad (1) \\ \qquad\qquad\qquad\quad CH_3 \\[4pt] CH_2=CH-CH=C-CH_3 \quad (2) \\ \qquad\qquad\qquad\quad CH_3 \end{cases}$$

Card 1/3

Diolefins From Unsaturated Alcohols.   S/079/60/030/011/022/026
IV. Catalytic Dehydration of 2-Methyl   B001/B055
2-Penten-1-ol

As dehydration catalysts for this reaction the authors used phosphate catalysts, i.e. type Φ (F), the catalyst used in the synthetic rubber industry for the preparation of divinyl from 1,3-butanediol (Ref. 17), and one of the dehydrating components of B_2 (B_2), the catalyst by

S. V. Lebedev (Ref. 1). 2-Methyl 1,3-pentadiene was obtained as main de-hydration product of 2-methyl 2-penten-1-ol. When the dehydrating component B_2 was used as catalyst, an olefin (C_6H_{12}) having the same carbon skeleton as the diolefin formed besides the latter. The formation of an olefin may be explained by the transformations characteristic of Lebedev's catalyst. A comparison of the results obtained in this work and those obtained in transformation reactions of n-propyl alcohol under S. V. Lebedev's reaction conditions confirm an assumption by Yu. A. Gorin. The latter assumed that this transformation involves the intermediate formation of 2-methyl 2-penten-1-ol. The study of the catalytic dehydration of 2-methyl 2-penten-1-ol and previous experimental data concerning the dehydration of α,β-unsaturated alcohols show that the scheme proposed by Ostromyslenskiy,

Card 2/3

Diolefins From Unsaturated Alcohols.   S/079/60/030/011/022/026
IV. Catalytic Dehydration of 2-Methyl   B001/B055
2-Penten-1-ol

according to which the dehydration proceeds via an allene compound as
intermediate, is not in agreement with the facts. Besides, this scheme is
impossible from the structural viewpoint in the case of α-alkyl substituted
alcohols. This paper was read at the All-Union Conference on Organic
Catalysis held in Moscow on November 18, 1959. There are 2 tables and
22 references: 13 Soviet, 3 US, 2 British, 3 German, and 1 Belgian.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State
             University)

SUBMITTED: October 27, 1959

Card 3/3

36553
S/081/62/000/006/089/117
B167/B101

AUTHOR: Afanas'yev, I. D.

TITLE: Synthesis of anti-wear additives for oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 542, abstract
             6M263 (Sb. "Prisadki k maslam i toplivam". M.,
             Gostoptekhizdat, 1961, 58-67)

TEXT: The compounds $(RCOOCH_2CH_2S-)_2$ (I) were prepared as follows:

$\overline{CH_2CH_2S}$ + $RCOOH \rightarrow RCOOCH_2CH_2SH$; $RCOOCH_2CH_2SH + 1/2\ O_2 \rightarrow I + H_2O$. The

following homologs of I were prepared (listed: R, $n^{20}D$, d_4^{20}, solidifica-

tion temp., viscosity in centistokes/$100°C$, viscosity in centistokes/$-30°C$):
CH_3, 1.5012, 1.1825, at $-60°C$ fluid, 2.52, 974; $n-C_3H_7$, 1.4878, 1.1440,

at $-60°C$ fluid, 2.25, 858; $(CH_3)_2CHCH_2$, 1.4774; 1.0672, $-60°C$, 2.21, 487;
$R(R')$ from the C_5C_6 fraction of synthetic acids, 1.4720, 1.0489, $-60°C$,
Card 1/4

Synthesis of anti-wear additives for oils

S/081/62/000/006/089/117
B167/B101

2.27, 462. The compounds I can be used in petroleum and in synthetic oils to improve their anti-wear properties. Its effectiveness in this respect was found to decrease with increasing number of C atoms in R.

From 2 moles of $\overline{CH_2CH_2S}$ and 1 mole of isovaleric acid the compound $RCOOCH_2CH_2SCH_2CH_2SH$ $\left[R = (CH_3)_2CHCH_2\right]$ was obtained. Air oxidation of this gave $\left[RCOOCH_2CH_2CH_2SCH_2S-\right]_2$ (II), $n^{20}D$ 1.472, 1.0212, solidification temp. $-60^\circ C$, viscosity 2.83 centistokes/$100^\circ C$ and 682 centistokes/$-30^\circ C$. Addition of II to an oil raised the critical load by 15% more than a similar addition of I in which R was $(CH_3)_2CHCH_2$. From 1 mole of H_2S and 4 moles of ethylene oxide the compound $H(OCH_2CH_2)_4SH$ was prepared, and converted by air oxidation into the corresponding disulfide. The latter was esterified with the C_5-C_6 fraction of synthetic acids to give $\left[R'C(O)(OCH_2CH_2)_4S\right]_2$ (III), d_4^{20} 1.047, solidification temp. $-60^\circ C$, viscosity 4.19 centistoke/$100^\circ C$ and 1571 centistoke/$-30^\circ C$.

Card 2/4

Synthesis of anti-wear additives for oils

Esterification of thiodiglycol gave the following series of

$\left[R(COOCH_2CH_2)_2S\right]_2$ (IV) (listed: R, d_4^{20}, solidification temp., viscosity in

centistoke/100°C): CH_3, 1.013, -60°C, 2.09; R', 1.007, -23°C, 2.64. From

aqueous Na alkylxanthates and CH_2ClCH_2Cl the technical compounds

$\left[ROC(S)SCH_2-\right]_2$ (V) were prepared, where R = C_2H_5, iso-C_3H_7, n-C_4H_9,

$(CH_3)_2CHCH_2$, $(CH_3)_2CHCH_2CH_2$. A freshly prepared alcoholic solution of Na

alkylxanthates gave, in absolute alcohol with CH_2ClCH_2Cl, pure crystalline

V in which R = iso-C_3H_7 (m. p. 49°, additive $l3$-23k (LZ-23k)) and

R = n-C_4H_9 (m. p. 37.5°, additive $l3$-25k (LZ-25k)), practically odourless

and white or slightly yellow in colour. Tests on the 4-sphere friction
machine showed that III, IV, technical V, and crystalline V are suitable
as ultra-high pressure additives. One of these is the additive $l3$-6/9
(LZ-6/9) (technical V, R = iso-C_3H_7). From Na alkylxanthates and β,β'-

dichloroethyl ether were prepared the compounds $\left[ROC(S)SCH_2CH_2\right]_2O$, in which

Card 3/4

Synthesis of anti-wear additives for oils

$R = C_4H_9$ and C_5H_{11}, which were found to be less effective ultra-high pressure additives than V. From Na dialkyldithiophosphates and benzyl chloride, 1,3-dichlorobutene-2, and CH_2ClCH_2Cl were prepared, respectively, $(RO)_2P(S)SCH_2C_6H_5$ (VI), $(RO)_2P(S)CH_2CH_2=CHClCH_3$ (VII) and $[(RO)_2P(S)SCH_2-]_2$ (VIII) (listed: R, solidification temperature, viscosity in centistoke/20°C): VI, iso-C_3H_7, -54°C, 10.06; VI, $(CH_3)_2CHCH_2$, -60°C, 13.47; VI, $(CH_3)_2CHCH_2CH_2$, -61°C, 14.82; VII, C_2H_5, -65°C (fluid), 3.80; VII, iso-C_3H_7, -65°C (fluid), 6.20; VII, $(CH_3)_2CHCH_2$, -65°C (fluid), 9.30; VII, $(CH_3)_2CHCH_2CH_2$, -65°C (fluid), 10.8; VIII, n-C_4H_9, -65°C, 10.75; VIII, $(CH_3)_2CHCH_2CH_2$, -65°C (fluid), 17.29. When tested on the 4-sphere friction machine, VI, VII, and VIII (5-7.5% solutions in mineral oil AУ (AU)) proved to be effective additives for ultra-high pressures. [Abstracter's note: Complete translation.]

Card 4/4

S/137/62/000/010/006/028
A052/A101

AUTHORS: Afanas'yev, I. D., Dobkin, I. Ye., Sazanova, M. N., Soltan, S. G.,
            Garzanov, G. Ye., Tokar', I. K., Chamin, T. A., Belosevich, V. K.,
            Pavlov, I. M.

TITLE: The effect of substances with a lower surface tension in the
            composition of synthetic·lubricants on the cold rolling of
            thin metal strips

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 10, 1962, 8,
            abstract 10D46 ("Novosti neft. i gaz. tekhn. Neftepererabotka i
            neftekhimiya", no. 4, 1962, 23 - 27)

TEXT: The data on the effect of various·technological lubricants on the
cold rolling of strips on a two- and four-high mill are cited. Synthetic greases,
- esters of saturated synthetic fatty acids, - reduce the friction and the re-
.sistance of metal to deformation at rolling of carbon steel and Ti (BT-1-T)
(VT-1-T) strips more effectively than animal fat, palm oil, mineral oils etc.
Synthetic lubricants, due to their low costs and good lubricating quality, should

Card 1/2

S/137/62/000/010/006/028
The effect of substances with a lower surface tension..A052/A101

be recommended for an extensive testing on cold rolling mills.

N. Yudina

[Abstracter's note: Complete translation]

Card 2/2

ALIYEV, Vagab Safarovich; AL'TMAN, Natal'ya Borisovna; AFANES'YEV,
     I.D., red.; BABUSHKINA, S.1., ved. red.

[Petroleum-based synthetic resins] Sintetichoskie smoly iz
neftianogo syr'ia. Moskva, Khimiia, 1965. 155 p.
                                        (MIRA 18:3)

L 14574-66   EWT(m)/f   DJ

ACC NR: AP6005336   SOURCE CODE: UR/0413/66/000/001/0074/0074

INVENTOR: Papok, K. K.; Kreyn, S. E.; Vipper, A. B.; Zuseva, B. S.; Garzanov, G. Ye.;
Vinner, G. G.; Dobkin, I. Ye.; Afanas'yev, I. D.; Rogachevskaya, T. A.; Somov, V. A.;
Botkin, P. P.; Kuliyev, A. M.; Zeynalova, G. A.

ORG: none

TITLE: Preparation of motor oil. Class 23, No. 177579

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 74

TOPIC TAGS: motor oil, antiwear additive, detergent additive

ABSTRACT: An Author Certificate has been issued for a preparative method for motor
oil, involving addition of a detergent and an antiwear additive to the oil base. The
method provides for the use of an alkyl-formaldehyde condensation product and of a
dialkyl dithiophosphate based on C_{12}-C_{16} alcohols as the additives.   [BO]

SUB CODE: 11/ SUBM DATE: 16Apr64/ ATD PRESS: 4/90

Card   1/1   UDC: 621.892.8